

201-15102

Anh Nguyen

02/18/04 06:38 AM

To: NCIC HPV@EPA

cc:

Subject: Environmental Defense comments on Benzene Sulfonic Acid (CAS# 98-11-3)

----- Forwarded by Anh Nguyen/DC/USEPA/US on 02/18/2004 06:34 AM -----



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02/17/2004 02:23 PM

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Subject: Environmental Defense comments on Benzene Sulfonic Acid (CAS# 98-11-3)

(Submitted via Internet 2/17/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and William.smock@verizon.net)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Benzene Sulfonic Acid (CAS# 98-11-3).

The Aromatics Sulfonic Acids Association (ASAA), in response to EPA's High Production Challenge, has submitted Robust Summaries and a Test Plan describing available data and proposed additional studies for benzene sulfonic acid. Our review of this submission indicates the Test Plan and Robust Summaries are well-organized and concisely describe the limited data available for this compound and a closely related chemical, toluene sulfonic acid, from which additional data are bridged. The Test Plan is generally well-written. While not required, the Introduction could be more informative with respect to how this chemical is used. For example, it is stated that benzene sulfonic acid is used "primarily" as an acid catalyst in the foundry industry in processes in which it is consumed. Thus, it might be assumed that there is little potential for its release into the environment or consumer exposure; however, our review of the literature indicates this chemical may also be used as an intermediate in the synthesis of a number of other major chemicals. Thus it would be of interest to know the potential for human and/or environmental exposure that may occur as a result of these additional -- and any other -- uses of this chemical.

The Test Plan and Robust Summaries also should provide a list of synonyms and commercial names by which this chemical is known or marketed.

Benzene sulfonic acid is a data-poor chemical; thus, it is appropriate that data, when available, are bridged from the structurally related chemical toluene sulfonic acid. Review of the data provided indicates that both of these chemicals are biodegradable and have low acute toxicity in the systems examined. Their biodegradability and high solubility in water indicate they should not accumulate in the environment.

ASAA has proposed a number of additional studies to address SIDS elements required under EPA's HPV Challenge. We would recommend one additional study and recommend against the conduct of others. First, we recommend a study of toxicity to algae because we do not agree with the sponsor's rationale that a study of toxicity to algae should be unnecessary if this compound is not toxic to Daphnia. The physiology of algae and Daphnia

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differ and a chemical may well be toxic to one and not to the other.

Second, the acute toxicity of benzene sulfonic acid and toluene sulfonic acid can almost certainly be attributed primarily, if not exclusively, to the fact that they are relatively strong acids that are highly irritating. Because of their high polarity and water solubility, they would not be expected to be absorbed appreciably into systemic circulation or across cell membranes, and should be rapidly excreted; hence, they are not expected to exert systemic toxicity to mammals at doses below which irritation would account for the majority, and possibly the entirety, of the adverse effects. Thus, although we appreciate ASAA's willingness to conduct additional animal studies to determine the repeated dose toxicity and developmental/reproductive toxicity of benzene sulfonic acid, we do not think such studies are well-advised. That is, the toxicity of strong acids is well established and they all act in essentially the same way. Thus, we do not believe that it would serve any purpose to subject additional animals to the irritating effects of a strong acid in order to fill out the matrix of required SIDS elements. We encourage EPA to exempt ASAA from the conduct of these studies.

Thank you for this opportunity to comment.

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